

Patent Abstracts of Japan

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TITLE : LIQUID REMEDY FOR DERMATOPHYTOSIS AND ITS PREPARATION

ABSTRACT : PURPOSE: Salicylic acid is dissolved in a specific ointment base consisting of polyethylene glycol and ethanol, whereby the precipitation of the salicylic acid is prevented in the liquid remedy for dermatophytosis.

CONSTITUTION: Almost equal amounts of a polyethylene glycol of 3,000~5,000 molecular weight and another polyethylene glycol of 300~500 molecular weight are mixed and about 30wt%, based on the polyethylene glycols, of salicylic acid is added to the mixture and dissolved by heating. Further, about 10wt%, based on the above total amount, of ethanol is added thereto, thus producing said liquid remedy for dermatophytosis. Said preparation is colorless and clear and a little viscous liquid, showing high effectiveness on both dry and wet type dermatophytosis. Since the content of ethanol is reduced, the precipitation of the salicylic acid on the skin can be prevented and the irritating property also is inhibited.

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Japanese Published Unexamined (Kokai) Patent Publication No. S55-35025; Publication Date: March 11, 1980; Application No. S53-108096; Application Date: September 5, 1978; Int. Cl.<sup>3</sup>: A61K 9/08 31/60; Inventor: Akira Ota; Applicant: Akira Ota; Japanese Title: Ekijo Mizumushi Chiryoyaku oyobi Sono Seihou (Liquid Dermatophytosis Remedy and a Method for Preparation Thereof)

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## Specification

### 1. Title of Invention

Liquid Dermatophytosis Remedy and a Method for Preparation Thereof

### 2. Claim(s)

1. A liquid dermatophytosis remedy, characterized in that polyethylene glycol at 3000 to 5000 molecular weight and polyethylene glycol at 300 to 500 molecular weight are mixed with each other at an almost equivalent amount; using the weight of the mixture as a reference, salicylic acid at up to about 30 weight % is added to the mixture and dissolved by a heating means; using the total weight of the mixture as a reference, ethanol at about 10 weight % is further added.

2. A method for preparation of a liquid dermatophytosis remedy, characterized in that polyethylene glycol at 3000 to 5000 molecular weight and polyethylene glycol at 300 to 500 molecular weight are mixed with each other at an almost equivalent amount; using the weight of the mixture as a reference, salicylic acid at up to about 30 weight % is added to the mixture and dissolved by a heating means; using the total weight of the mixture as a reference, ethanol at about 10 weight % is further added.

### 3. Detailed Description of the Invention

This invention pertains to dermatophytosis remedies. More specifically, this invention relates to dermatophytosis remedies that contain salicylic acid at a high concentration up to 30 weight % and a lower amount of liquid alcohol at a normal temperature.

A variety of dermatophytosis remedies were previously offered. However, there are no remarkable dermatophytosis remedies that have been offered in terms of the effectiveness. A large number of the patients are waiting for specific remedies to be realized.

A significant effect of salicylic acid on dermatophytosis is already known. Salicylic acid is usually used in the form of alcohol solutions or ointments.

However, alcohol solutions stimulate affected areas. In particular, if erosion is seen on the affected areas, an extreme pain is given to the patients. Since alcohol is volatile, it evaporates after the solutions have been applied on the affected areas. Salicylic acid is deposited in the form of crystal. This crystalline salicylic acid does not permeate into the skin. Thus, it does not demonstrate any treating effect. This effect becomes more significant as the concentration increases. For this reason, the effect of salicylic acid cannot sufficiently be demonstrated as solutions at a high concentration.

The ointment form is not suited if the affected areas are wet even though the stimulating effect is low. Ointments easily contaminate clothes. The affected areas also easily become unclean. The ointment form has a lower effect than that of the liquid form.

The inventor eagerly studied on a dermatophytosis that contains salicylic acid as a main agent. As a result, the inventor has discovered that salicylic acid liquidizes with a specific ointment base agent. However, in this case, when the air temperature decreases,

for example, to 18°C or lower, the liquid turns white according to the amount of salicylic acid contained. In order to solve this problem, the inventor has also discovered that the cloudiness is prevented by adding ethanol at a small amount at about 10 weight %. Finally, the inventor has succeeded to produce an extremely effective liquid dermatophytosis remedy that overcomes the aforementioned disadvantages of the salicylic acid formula and that contains a lower amount of alcohol.

In detail, the invention offers a liquid dermatophytosis remedy and a method for preparation thereof, characterized in that polyethylene glycol at 3000 to 5000 molecular weight and polyethylene glycol at 300 to 500 molecular weight are mixed with each other at an almost equivalent amount; using the weight of the mixture as a reference, salicylic acid at up to about 30 weight % is added to the mixture and dissolved by a heating means; using the total weight of the mixture as a reference, ethanol at about 10 weight % is further added.

The dermatophytosis remedy of the invention is a colorless, transparent and slightly viscous liquid. It is applied on affected areas 2 to 3 times a day. The remedy hardly demonstrates a stimulating effect and an extremely significant effect on both dry and wet dermatophytosis.

An example of the applications is indicated as below.

Symptom	Number of treated patients	Treating days	Number of completely cured patients	Number of uncured patient	Note
Light	80	7 to 10 days	80	0	
Relatively heavy	5	80 days	5	0	
Heavy	5	About 6 months	4	1	
(Over 10 years)					The symptom of the uncured patients is also significantly improved.

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